

Appl. No. 09/745,229
Amdt. Dated April 28, 2004
Reply to Office action of April 1, 2004
Attorney Docket No. P14931/32944-00036USPT
EUS/J/P/04-6089

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-5. (Cancelled)

6. (Original) A method of providing VoIP formatted communications during an inter-exchange handoff operation within a telecommunications network including a Target MSC (TMSC) having a designated channel, and a Mobile Station (MS) served by a Serving MSC (SMSC), wherein a handoff forward call connection operation occurs from the SMSC to the TMSC, comprising the steps of:

determining that the handoff forward call connection operation from the SMSC to the TMSC should occur;

allocating a first VoIP gateway to the SMSC;

allocating a second VoIP gateway including an IP identification address to the TMSC;

completing a second voice path between the designated channel and the second VoIP gateway; and

completing a first voice path between the SMSC and the first VoIP gateway,

wherein the first VoIP gateway is in electronic communication with the second VoIP gateway.

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7. (Original) The method of Claim 6, further comprising the steps of:

assigning the designated channel to the TMSC; and

moving the MS to the designated channel of the TMSC.

8. (Original) The method defined in Claim 6, further including the steps of
sending an unformatted voice audio signal from the SMSC to the first VoIP gateway;

formatting the unformatted voice audio signal within the first VoIP gateway to
provide a formatted voice audio signal for transmission over an Internet Protocol (IP)
network in electronic communication with the first and second VoIP gateway;

transmitting the formatted voice audio from the first VoIP gateway to the second
VoIP gateway over the IP network using the IP identification address of the second
VoIP gateway; and

receiving the formatted voice audio at the second VoIP gateway and recovering
the unformatted voice audio signal for sending to the MS.

9. (Original) The method defined by Claim 6, further including the steps of:

formatting a voice over air interface audio signal by the second VoIP gateway to
provide a formatted voice over air signal for voice transmission over an IP network in
electronic communication with the first and second VoIP gateway;

transmitting the formatted voice air interface audio signal from the second VoIP
gateway to the first VoIP gateway over the IP network; and

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receiving the formatted voice over air signal at the first VoIP gateway and recovering the voice over air signal for sending to a call connection maintained by the SMSC.

10. (Original) A method of providing Voice over Internet Protocol (VoIP) operations during an inter-exchange handoff forward with path minimization call connection operation within a telecommunications network including an Anchor MSC (AMSC), a Target MSC (TMSC) having a designated channel, and a Mobile Station (MS) served by a Serving MSC (SMSC), wherein the AMSC uses a first VoIP gateway to communicate with an internet protocol (IP) network, the SMSC uses a second VoIP gateway to communicate with the IP network, and the TMSC uses a third VoIP gateway to communicate with the IP network, and wherein the handoff forward with path minimization call connection operation occurs from the AMSC to the TMSC, comprising the steps of:

determining that a handoff forward call connection operation to the TMSC should occur;

verifying that path minimization is supported by the AMSC;

allocating the first VoIP gateway to the AMSC;

allocating the third VoIP gateway including an IP identification address to the TMSC;

storing the IP identification address in the AMSC;

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completing a voice path between the designated channel and the third VoIP gateway, wherein the first VoIP gateway is in electronic communication with the third VoIP gateway; and

directing the SMSC to release the second VoIP gateway.

11. (Original) The method of Claim 10, comprising the steps of:

verifying that the designated channel is available to support the MS; and
moving the MS to the designated channel,

12. (Original) The method defined in Claim 10, further comprising the steps of:

sending an unformatted voice audio signal from the AMSC to the first VoIP gateway;

formatting the unformatted voice audio signal at the first VoIP gateway into a format suitable for transmission over the IP network;

transmitting the formatted voice audio signal from the first VoIP gateway to the third VoIP gateway over the IP network; and

receiving the formatted voice audio signal at the third VoIP gateway and recovering the unformatted voice audio signal for sending over an air interface to the MS.

13. (Original) The method of Claim 10, further comprising the steps of:

sending an unformatted voice over air interface audio signal from the TMSC to the third VoIP gateway,

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formatting the unformatted voice over air interface audio signal at the third VoIP gateway into a format suitable for transmission over the IP network;

transmitting the formatted voice over air interface audio signal from the third VoIP gateway to the first VoIP gateway over the IP network; and

receiving the formatted voice over air interface audio signal at the first VoIP gateway and recovering the unformatted voice over air interface audio signal for sending over a call connection maintained by the AMSC.

14-18. (Cancelled)